Chapter 2

Meghan Carfioli/USFWS

Looking downstream on Little Creek

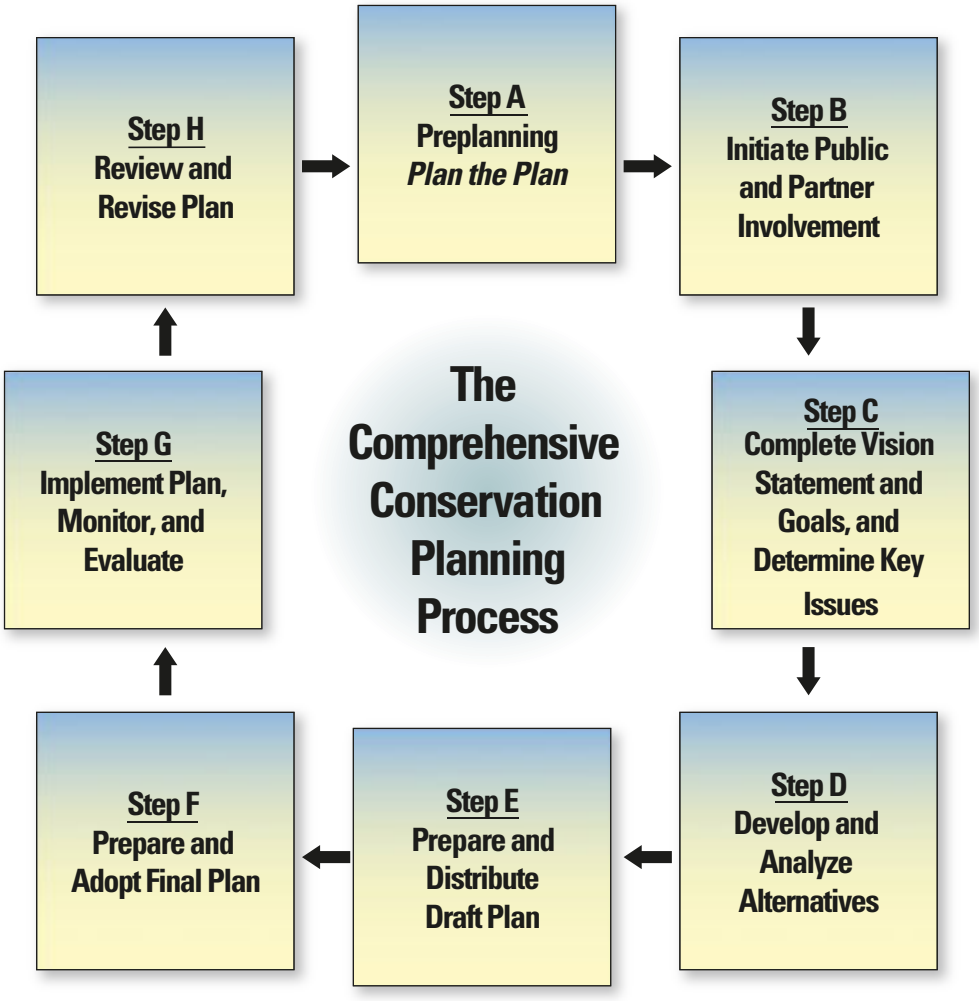
The Planning Process

- 2.1 The Comprehensive Conservation Planning Process
- 2.2 Issues, Concerns, and Opportunities

2.1 The Comprehensive Conservation Planning Process

Service policy (602 FW 3) establishes a planning process that also complies with NEPA. The full text of the policy and a detailed description of the planning steps can be viewed at: *http://policy.fws.gov/602fw3.html* (accessed August 2012). We followed the process depicted below in developing this CCP. We completed process steps A through F with distribution of the final plan. These steps are described below in more detail and depicted in figure 2.1. Additional information regarding consultations and coordination that occurred during the preparation of this CCP is detailed in chapter 5.

Figure 2.1. Planning Process



Step A: Initial Planning
We began preparing a CCP for Presquile NWR in January 2011. Initially, we focused on collecting information on the refuge's natural and cultural resources and public use program. The CCP core team of refuge and Regional Office staff and one representative from Virginia's Department of Game and Inland Fisheries (VDGIF) started meeting to discuss existing information, draft a vision statement, and prepare for the public scoping meeting and a technical meeting of State and Federal partners.

Step B: Public Scoping
We initiated the public scoping process and distributed our first planning newsletter in March 2011. The planning newsletter included location, date, and

time information about upcoming public scoping meetings that would serve to inform the public about current refuge management and elicit input on topics of interest to the public. We distributed the newsletter to our mailing list of more than 160 parties, including media outlets, and posted announcements on the refuge Web site.

Two public scoping meetings were held on April 19, 2011, in Chester, Virginia, at the Chesterfield Public Library. One session was held from 2 to 4 p.m., and the other was held from 6:30 to 8:30 p.m. These meetings were attended by seven individuals from the surrounding communities. A third public scoping meeting was held in Richmond, Virginia, at the Maymont Park Stone Barn from 6:30 to 8:30 p.m. on April 20, 2011. This meeting was attended by six individuals. Refuge and planning team staff were also in attendance at all three meetings, but not included in the participant attendance noted.

Steps C and D: Vision, Goals, and Alternatives Development
The core team held their agency scoping workshop on April 20, 2011, from 10 a.m. to 3 p.m. The workshop was attended by 14 representatives from county, State, and Federal agencies. Refuge and planning team staff were also in attendance at this workshop, but not included in the participant attendance noted. The purpose of the meeting was to identify issues, determine the significant resource values attributed to the refuge, and to seek advice from technical experts on what resources of conservation concern in the refuge planning area should be a management priority. We continued to consult with experts throughout 2011 and 2012, and met regularly as a core team, as we developed and refined our alternatives.

Step E: Draft CCP and NEPA Document
Between May 2011 and August 2012, the core team worked on drafting the CCP/EA. We published a notice of availability in the *Federal Register* announcing our release of this draft for a 37-day period of public review and comment on August 8, 2012. During that comment period, we held three public meetings to obtain comments directly from individuals. We also received comments by regular mail and e-mail. After the comment period ended, we reviewed and summarized all of the comments received, developed our responses, and revised the CCP as warranted based on the comments. We include a summary of these comments, and our responses to them, as appendix F in this document.

Step F: Adopt Final Plan
We submitted the final plan to our Regional Director for review in September 2012. The Regional Director selected alternative B from the draft CCP/EA, along with several minor changes, to implement in the final plan. Our Regional Director also determined that a FONSI was appropriate (see appendix L), and certified that this final CCP meets agency compliance requirements, achieves refuge purposes, and helps fulfill the mission of the Refuge System. With an affirmative FONSI and other positive findings, the Regional Director approved the final CCP. We will publish another notice of availability in the Federal Register to announce the final decision and availability of the final plan. We will also distribute a newsletter announcing this decision to all contacts on our project list as well as post that newsletter on our Web site. These actions will complete planning step F to prepare and adopt a final plan.

Step G: Implement, Monitor, and Evaluate Plan and Step H: Review and Revise Plan
We will begin to implement the plan and monitor our success immediately after we publish our final notice of availability in the Federal Register. Over the 15-year life of the plan, we will annually review the plan to see if it requires any revisions. We will update and revise the plan at least every 15 years, or sooner if significant new information becomes available, ecological conditions change, a

major refuge expansion occurs, or we identify the need to do so during our annual reviews.

2.2 Issues, Concerns, and Opportunities

The Service defines an issue as "any unsettled matter requiring a management decision" (USFWS 2012a). Issues can include an "initiative, opportunity, resource management problem, threat to a resource, conflict in use, or a public concern." Issues arise from many sources, including refuge staff, other Service programs, State agencies, other Federal agencies, our partners, neighbors, user groups, or Congress. One of the distinctions among the proposed management alternatives evaluated in the draft CCP/EA was how each addressed those issues.

From agency and public meetings and planning team discussions, we developed a list of issues, concerns, opportunities, and other items requiring a management decision. We placed them in two categories: key issues and issues outside the scope of this analysis.

- Key issues—Key issues are those the Service has the jurisdiction and authority to resolve. The key issues, together with refuge goals, form the basis for developing and comparing alternatives. The key issues are described in detail below.

The following summary provides a context for the issues that arose during the scoping process.

Key Issues
We derived the following key issues from public and partner meetings and further team discussions.

Biological Management
For national wildlife refuges, the conservation of wildlife and habitats is the highest priority, and serves as the foundation for all that the Service does. Many refuges were established for a very specific purpose, such as protecting a particular species or habitat. Presquile NWR's purpose is broader in its scope as an inviolate sanctuary for migratory birds. As such, consideration of management alternatives was made in light of bird conservation priorities and other management goals.

Protection and restoration of refuge habitat is an important issue addressed in this plan. The planning team received many opinions on specific actions or techniques to accomplish that endeavor. Some suggestions and actions fall outside Service jurisdiction. Some are best accomplished in partnership with other Federal or State agencies, or non-governmental organizations.

Specific questions asked regarding the topic of biological management include:

(1) How will the refuge respond to potential impacts of climate change on existing refuge habitats?

Climate change and its corresponding effects on sea level rise, species migrations or range distributions, extreme shifts in temperature and precipitation, and invasive species introductions may potentially pose dramatic threats and alterations to the habitats encompassed within the refuge. The ability to adapt or address these ever-changing concerns requires a comprehensive understanding of the refuge's landscape context, individual habitats, species utilization, and their resilience.

Presquile NWR is located at or near sea level and is subject to tidal hydrology across a large portion of the refuge. Being located near the transition between the coastal and inland plant communities as well as the upper extent of the James River's tidal range, the refuge is located in a transitional zone for many plant, fish, and wildlife species. Many of the refuge habitats have developed under the coastal conditions present over the past 10,000 years. Given the projections for shifts in mean temperature and precipitation for the region, new introductions or altered distributions of both native and nonnative species are possible results of climate change.

The refuge is also evaluating potential habitat changes caused by rising sea levels. We have analyzed the effect of sea level rise on refuge habitats through the use of a Sea Level Affecting Marshes Model (SLAMM) analysis originally completed in 2009. Its results are discussed in chapter 3 and how the refuge will respond to its implications is noted under goal 1 of the management plan discussed in chapter 4.

(2) How will the refuge improve its biological integrity in light of landscape-level ecological concerns such as biological connectivity with other nearby habitats or impacts from air and noise pollution from surrounding industry?

Fragmentation of both terrestrial and aquatic habitats can have adverse effects on many plant, fish, and wildlife species, such as reducing biodiversity, limiting genetic diversity, and increasing susceptibility to species invasion and other stressors. Agriculture, as well as commercial or residential development, isolates a patchwork of forest, wetland, and grassland habitats. Dams, dikes, and other water control structures fragment the available aquatic habitat in a similar manner. The refuge is a physical island, as well as a biological island, amidst a developing landscape.

As a result, few opportunities remain for improving biological connections on the refuge itself. Improving regional connectivity with nearby wildlife habitat corridors and promoting connectivity would likely benefit species that utilize the refuge. Most lands providing optimal connection to adjacent habitats are located on non-refuge lands and require extensive landowner or partner coordination. Even though connectivity is important to the protection and conservation of biodiversity found on refuge lands, there are limited opportunities within the jurisdiction of the Service outside of the refuge in surrounding lands and waters.

The refuge is also located in close proximity to several industrial and commercial areas along the James River. Four industrial plants are within 1 mile (1.6 km) of Presquile NWR. As described in chapter 3, several pollutants monitored in surrounding areas for human health and safety have repeatedly been recorded above the air quality standards set by either the EPA or Virginia Department of Environmental Quality (VDEQ). Since sources of air quality are generated outside of the refuge, the Service cannot directly control levels of emissions. As such, consideration of management alternatives will be made to ensure compliance with existing Federal, State, and local air quality regulations.

We envision utilizing a variety of partnerships with Federal, State, and non-governmental organizations to address these landscape-level concerns on the refuge. How the refuge will respond to connectivity needs is noted under goals 1 and 2 of the management plan discussed in chapter 4.

(3) How will the refuge address erosion and sediment deposition issues on and adjacent to the refuge?

Erosion along the Turkey Island Cutoff poses a threat to loss of land and associated resources at Presquile NWR. The Turkey Island Cutoff, completed

in 1934, allows more efficient transport of commercial shipping along the James River. However, erosion of the southern boundary of the refuge has resulted in large losses of land in recent decades. Hurricane Camille in 1969 also resulted in land loss. Based on a review of current and historic aerial photography, we have estimated that Presquile NWR has lost more than 11 acres of land since 1968.

Sediment deposition in other portions of the James River poses potential concerns related to waterfowl protection at the refuge. Sedimentation in the oxbow has resulted in the mean low water line moving into the former channel. Without dredging and other mitigation, this increased sedimentation could eventually result in a complete stop of water flow. Some concerns have been expressed that this sediment deposition may pose a threat to waterfowl habitat in the oxbow.

Addressing erosion to protect against further loss of land, as well as providing habitat for waterfowl, are primary concerns to refuge staff. How the refuge will respond to concerns related to tidal freshwater marsh conservation and restoration needs is noted under goals 2 and 5 discussed in chapter 4.

Cyrus Brame/USFWS

Shoreline erosion

(4) How will the refuge manage invasive, nonnative, and overabundant species?

Invasive plant species, such as Johnsongrass and Canada thistle, threaten refuge habitats by displacing native plant and animal species, degrading natural communities, and reducing natural diversity and wildlife habitat values. They outcompete native species by dominating light, water, and nutrient resources, and are particularly menacing when they dominate and overtake native habitats.

There are additional concerns that other invasive species, such as exotic insects, fish, and other animals, should be considered and managed as well. Climate change estimates may also result in a shift of species distributions or conditions across the region that may allow introduction of additional species in the future.

Prioritization and management of invasive species should be put in context with other regional efforts to be most effective, but is compounded by limits on staff and resources available to implement treatments against invasive species.

How we respond to these concerns is noted under goals 1 and 2 discussed in chapter 4.

(5) What will the refuge do to manage the 223 acres of grassland habitat?

The 223 acres of grassland habitat on the refuge today is known to have been farmed for over 300 years (Goode et al. 2009), which includes being farmed by the Service from 1953 to 2000. Since 2000, the farm fields have converted to grassland habitat through natural succession. This area provides a small amount of grassland habitat for migratory birds and other wildlife species that use open spaces. In a larger landscape context, this type of habitat is becoming less common as farming practices convert hay fields to row crops and other fields become developed as a part of residential areas. In addition, the patch size of the remaining grassland has been decreasing, which reduces the value to patch-size-dependent wildlife.

The succession of grassland habitats to shrubs and early successional tree species to mid-to-late successional tree species is a natural process that occurs in the absence of a disturbance that maintains or resets the successional stage. Over time, as the habitat changes, the types of wildlife utilizing the area change due to each individual species' needs and life cycle. Natural disturbances include invasive species infestations, disease, fire, and large weather events such as hurricanes or tornadoes. Habitat management activities such as mowing, herbicide application, and prescribed fire can emulate the natural disturbance process and restore or maintain a desired successional stage.

In many instances in natural areas across the country, including refuges, habitat management activities are effective at restoring missing disturbance processes. The location of Presquile NWR makes several management activities more difficult. Prescribed fire has not been shown to be an effective tool for the refuge due to changing weather conditions, the proximity of roads and industries downwind of prevailing wind directions, and logistical obstacles associated with getting prescribed fire equipment and staff to the refuge. A significant concern with prescribed fire is smoke management and avoiding negative impacts to local residents and industry. Conducting a prescribed burn that meets the habitat management objectives has been relatively unsuccessful or unpredictable. Mowing is another option for management; however, it requires equipment and labor resources to complete on a regular basis. Without active management, the grassland habitat of Presquile NWR would succeed toward early successional shrub and tree species.

There is concern that allowing the grassland habitat to convert to early successional tree species will negatively impact the wildlife species that are currently using it. There is value in this concern given the low abundance of this habitat on the larger landscape. Additionally, if the area succeeds to pioneer shrub and tree species, would the area be allowed to succeed to the later stages in the absence of a natural disturbance or would habitat management techniques be employed to reset succession to an early stage? Deciding how the current grassland habitat will be managed in the future will consider refuge resource limitations, benefits to wildlife on the landscape level, and maintaining or restoring natural functions of the refuge.

How we respond to these concerns is noted under goal 2 discussed in chapter 4.

Public Use and Interpretation of Environmental and Cultural Resources
Specific questions asked regarding the topic of cultural resources, environmental education, and public refuge use include:

(1) To what extent would the refuge interpret or educate the public about cultural resources, historical landscapes, and American Indian history and culture on or around the refuge?

The area known today as Presquile NWR is, and was historically, an important location for Virginia Indians due to its location on the James River. The oldest evidence of American Indian presence at present day Presquile NWR dates to 3,000 B.C. Virginia Indian tribes are known to have been present when Europeans settled the peninsula in 1613.

Presquile NWR offers the opportunity to educate the public about the cultural resources and landscapes on the refuge. The refuge itself is a relatively undisturbed area with minimal modern structures and limited access. One structure, the Menenak Discovery Center, uses the Algonquin word for island in its name and provides interpretive information about American Indians. This landscape can help provide a living history landscape connecting visitors to the area's natural and cultural history. Present day Presquile NWR includes lands and waters that supported American Indians for centuries, as well as early European settlements. The recent creation of the Captain John Smith Chesapeake NHT is promoting the connection of cultural landscapes along the James River, including Presquile NWR. During the scoping period for this CCP, we received several inquiries from the public comments regarding the extent to which the refuge would educate and interpret the refuge's cultural history.

The refuge received comments during scoping emphasizing the value of the refuge area to American Indians. In particular, it has been recommended that we identify and communicate how natural resources would have been used by Virginia Indians, particularly the Appamattuck and Weyanock Tribes, when interpreting various natural resources. It was also emphasized that Presquile NWR provides an ideal place to demonstrate to the public how an appreciation of indigenous values regarding stewardship of land and wildlife relates to our current efforts in conservation and environmental stewardship.

How we respond to these concerns is noted under goal 3 discussed in chapter 4.

(2) What will the refuge do to improve its environmental education, interpretation, wildlife-dependent recreation, and compatible public uses?

The isolated landscape of the refuge inherently limits public access and use. As a result of this, the refuge also offers unique opportunities for the visitors to experience the natural world. A small boat dock is the designated point of authorized access to the island for individuals and groups. The ability to move people to the refuge is limited due to the decommissioning of the cable ferry for public use. There is concern that the limited access to the refuge is limiting opportunities for environmental interpretation, wildlife-dependent recreation, and other compatible public uses. Management will consider opportunities to enhance public uses on the refuge by upgrading refuge infrastructure as necessary and by working with partners to achieve the refuge's goals for appropriate and compatible uses.

Participants in the refuge's annual deer hunt acquire a special permit. During public scoping, we received inquiries regarding the refuge's intent to offer turkey hunting.

How we respond to these concerns is noted under goal 4 and 5 discussed in chapter 4.

(3) How does the refuge plan to accommodate an increase in visitors while maintaining protection of sensitive fish and wildlife resources?

Currently, there is recognition that, as a society, Americans have become increasingly detached from nature due to changing lifestyles, past and current urban migrations, and shifts towards activities that reduce the amount of time individuals spend outside. Presquile NWR and other refuges can play an important role in providing opportunities for the public to reestablish their connection with nature.

During the public scoping period, we received comments noting concerns about the limited public access to this island refuge and concerns that expanded refuge access would negatively impact fish and wildlife resources sensitive to even minimal human disturbance, such as walking along a trail or paddling the waters on or around the refuge. Management and development of visitor services will need to balance providing opportunities to the public while not harming the refuge's natural resources.

How we respond to these concerns is noted under goals 4 and 5 discussed in chapter 4.

(4) To what extent will the Service use partnerships with area agencies, businesses, and organizations to achieve the refuge's resource conservation and visitation goals?

The physical location and role of the refuge in the larger landscape or regional context is strongly considered during the planning process for the refuge. However, there is concern that refuge management activities in several different areas including biological resource management, environmental education, and visitor services will be done independent of the needs and goals of area agencies, business, and organizations. Refuge management is driven by several Service policies and mandates (see chapter 1) along with the legislative acts used to create the refuge. Using these guidelines, management of the refuge will build on existing partnerships and explore additional opportunities in support of resource conservation and visitation at Presquile NWR and the surrounding area.

How we respond to these concerns is noted under goals 1 through 5 discussed in chapter 4.

(5) At what levels does the Service plan to continue staffing and management of the refuge?

Several existing or proposed management activities such as riparian restoration, visitor services, and maintenance of the existing and proposed refuge infrastructure require a level of staff and financial resources to complete. Presquile NWR is encompassed within the Eastern Virginia Rivers NWR Complex. The refuge complex shares a staff of eight full-time employees; however, no single staff person is solely dedicated to Presquile NWR.

There is concern that proposed management activities will not have the appropriate staffing levels or financial resources to be fully used. Mobilizing local volunteer groups, emphasizing partnerships, or recruiting summer college students interested in performing research on the biological resources of the refuge may provide opportunities to increase the capacity of the refuge to achieve management activities.

How we respond to these concerns is noted under goals 4 and 5 discussed in chapter 4.